THE GENESEE FARMER.

VOL. VIII. ROCHESTER, N. Y. MAY 26, 1838. NO. 21.

PUBLISHED BY LUTHER TUCKER,

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

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THE GENESEE FARMER.

SATURDAY, MAY 26, 1838.

Rotation of Crops.

The necessity of a rotation of crops is founded on a few simple principles, the force of which, and their application, any one may understand. They have been very clearly and concisely stated by Chaptal, and they are so fundamentally important to a correct course of farming, that they should be impressed on the mind of every tiller of the soil. They will of course bear repetition.

Principle 1. All plants exhaust the soil.
" 2. All plants do not exhaust the soil equally.
" 3. Plants of different kinds do not exhaust a soil in the same manner.
" 4. All plants do not restore to the soil the same quantity or quality of manure.
" 5. All plants do not foul the soil equally.

From these established principles the following are legitimate inferences. 1st. No soil can nourish a long succession of crops without exhaustion. There would seem to be no exceptions to this, unless the case of river alluvion, such as that of the Genesee Flats for example, may be considered such. But in this case the annual overflowing, either entire or partially, renews the deposit of fertile matter, or by permeating the soil divests it of any injurious principles it may have received from previous crops. The inference may therefore be considered sound, and the man who crops continually without making corresponding returns to the soil, will experience its truth in the rapid decrease of his crops grown on such land.

Another inference, and the 2d, would be, that while one kind of crop exhausted the soil by drawing most of its nourishment direct from the earth, and returning nothing of consequence to it, others, deriving a large part of their nourishment from the atmosphere, and returning to the earth much vegetable matter, scarcely, if at all, exhaust the soil upon which they grow. To illustrate this, let us take grains and clover, or grains and roots with large tops, such as the beet, ruta baga, &c. The cultivation of white grains, such as wheat, &c. probably wears as rapidly upon land as any crop the farmers of the north can cultivate. This in part may be attributed to the ripening of the seeds, but more we think to the plants deriving a large part of their nutriment from the earth, and but little from other sources, while at the same time the return they make of vegetable matter is the smallest possible quantity. Clover would seem to derive its nourishment in a different manner; the matter which forms its roots appears to have been elaborated in its rich and succulent herbage, and it is on the leaves of plants that the atmosphere produces its greatest effects.

The 3d inference would be, that plants which draw their nourishment from the earth, and those that are the most influenced by atmospheric causes, should alternate with each other; and that plants that draw their nourishment from the surface should be succeeded by those that seek their food at greater depths. Here is the reason, and a sufficient one it is, why the roots should constitute a more important part of the system of American Husbandry. The grains are fibrous rooted and spread themselves principally near the surface; the tap rooted plants, such as clover, turneps, &c. go deeper, and while their luxuriant leaves are employed in aerating their juices, their roots are penetrating the earth beyond the reach of the fibrous class.

A 4th inference would be, that a succession of plants of the same species, when possible, should be avoided, as continued cultivation has a tendency to increase the enemies of that particular plant, and a rotation or change would tend to prevent their increase. Owing to the sowing seed without preparation or precaution, the Hessian fly, in some districts of England and Long Island, became so numerous as to nearly destroy the wheat crop. It was consequently mostly abandoned for a few years in such places, and the insect, lacking its proper nidus for propagation, soon disappeared. Such has been the case with the pea bug. The bug had become so numerous in some parts of the western district that the pea was almost worthless; and the culture was generally discontinued. A few years has elapsed, and they are again coming into use as a field crop, and the bug is scarcely known, certainly not to any injurious extent. A brewer at Newburyport in Massachusetts, a few years since imported some barley from Holland, and some of it was used for seed by farmers in the vicinity. It was infested by an insect which spread rapidly, and compelled the farmers to abandon barley as a crop for two or three years. The insect is now extinct, and barley is again cultivated with success.

A 5th inference would be, that crops liable to be infested with peculiar weeds, should not be cultivated in succession, but by a rotation exposed to a culture that will eradicate them. The culture of corn and roots that require repeated hoeings, is found effectual in destroying many weeds that get a foothold in grass lands, and by seeding lands in rotation exhaustion is prevented, and the soil kept clean, in good tilth, and prepared for any valuable crop required to be grown upon it. Pernicious weeds oftener obtain a foothold with the grains, than with any other crop, as these shade the ground but little, and afford a chance for vegetation which thick growing or large leaved plants do not. Farmers find that charlock and redroot are thus disseminated in their wheatfields, and that a rotation of crops is necessary to clear them from these pestiferous intruders.

Another important inducement to a rotation of crops, but one which is often overlooked in considering the matter, is the greater advantages that can be derived from manure, where this system is pursued, than where it is not. Every farmer is aware of the fact, that there is a wide difference among cultivated plants as to the effect produced by the application of manures. Some can scarcely receive too much, or have it furnished too directly. They are gross feeders, and appear to devour the elements of nutrition without stint or injury. Corn, and the roots generally, are of this class. Others seem to be more delicate, and are either destroyed outright by too large quantities of unfermented manures, or are excited to such a growth of straw, that the juices intended to form the seed, are swallowed up and lost in the mass, and a half filled worthless kernel, and lodged, half rotted straw, is the result. A rotation of crops enables the farmer to shun such disasters. He can apply his fresh manures to crops that require them, and will be decidedly benefited by them; and when the fermentation is over, and the decomposition complete, then the grains which require such manures are sown and reap the full benefit. There can be no reasonable doubt that much of the efficiency of manure is lost, by allowing the decomposition to take place on the surface of the earth or in the barn yard, and some experiments would seem to show that the loss in this way of treating manure, is precisely equal to that afforded to a corn or root crop while undergoing decomposition in the earth.

Different soils require a different rotation of crops; and the time required to complete the course is mainly depending on the richness of the soil. The most simple and short alternation of crops has been adopted by many of our farmers, that of wheat and clover alone; or by which a wheat crop is grown every other year. Clover seeds are sown on the wheat, pastured in the fall, plastered in the spring, fed through the summer or mown, and then turned under for wheat. Whether this forcing course, for it can be considered as nothing else, will eventually be found the most profitable, we much question: a course admitting of greater variety, and of longer duration, would be in our opinion preferable. Roots or corn, manured; wheat or barley with seeds; grass or clover, fed or mown for two or three years; would perhaps be better on wheat soils where due regard was had to durable excellence of soil, as well as present profit.

A suitable rotation of crops on a farm has a tendency to keep up the growing of cattle and sheep, a part of farming very apt to be neglected where the culture of grain is the exclusive object. Perhaps there is no agricultural maxim more true than the Flemish one;—No food, no cattle; no cattle, no manure; no manure, no grain;—and when it is remembered that without manures there can be no permanent fertility to the soil, the advantage of such a course is not perhaps overstated.

Since the experiments of Dombasle, Dutrochet, and Macaire have given some plausibility to the opinion, that plants secrete and deposit substances injurious to succeeding crops of the same kind, the attention of foreign agriculturists has been directed to the preventing such succession of the same plant on the same soil, as far as practicable. A writer in a late British Farmer's Magazine recommends the following course as suitable on a dry soil, good for wheat, and on which turneps can be fed off by sheep.

" 1st. Turneps, on half the land prepared for this crop, sow white and red, (common or globe) and on the other half ruta baga, manured with bone dust, rape cake, or dung; the latter applied in a coarse state, ploughed in and well incorporated with the soil, the last ploughings in preparing the fallow. 2d crop, barley, half Chevalier and half American. 3d crop, seeds, half red clover with a mixture of rye grass, and half Italian rye grass, manure the young seeds, cut the first crop for hay, and feed the second. 4th crop, wheat, sow different varieties, such as the Chevalier prolific, ten rowed prolific, and golden drop. Go through the same course again, except putting on dung where bone dust and rape cake was before applied; ruta baga, where the turneps, common and globe, were grown; changing the chevalier for American barley; changing the grasses in the same way; and substituting another variety of wheat where the former grew. The above is a four year course, yet the same varieties of grain cannot be grown on the same land oftener than once in eight years. It would be good policy to have a few acres in mangel wurzel on a portion of the fallow land, instead of turneps, to guard against a scarcity of food in the spring; this root is also very valuable in the lambing season for ewes, as it forces a great quantity of milk."

The changing of one *variety* of wheat for another, we imagine would be of little consequence; but not so the substitution of the fibrous rooted for the taprooted plants, or barley, wheat, and the grasses in succession. If the doctrine of the deposition of noxious matter is correct, it must have reference more to species, than variety, and it should be to change in this respect that the attention should be directed. But whether this doctrine be true or false, the reasons for a rotation of crops are untouched; and we are confident that no farmer, who views his interests in their true light, will discard the system, or for the sake of a dubious present profit, put at hazard the certainty of permanent productiveness in his soils.

GYPSUM.

The rapid increase witnessed yearly in the use of this mineral manure, is one of the most decisive proofs of its utility. However farmers may differ as to its mode of operation, there are few that dissent from its efficiency and value. Some, while they admit its usefulness *now* are apprehensive of its effects on the soil for the *future*

being inclined to adopt a maxim applied in some parts of England to marl—'that it makes rich fathers but poor sons,' or that by forcing the soil, it only the sooner exhausts it. It has been found however that the use of marl may be continued for an indefinite period with increasing advantage to the soil, if the proper rotation of crops is pursued, and suitable returns of vegetable matter are made. So with plaster;—applied continually to land, and no cessation of cropping permitted, or vegetable matter returned, the soil must be exhausted, and inferior crops eventually result. But when suitable alternations of white and green crops occur, or the grains are succeeded by clover and roots, no one need to fear injury from the use of plaster, or apprehend that large crops now, are indicative of inferior ones in time to come. All the mineral manures, those that act from exciting instead of nutritive causes, such as lime, marl, and plaster, are liable to the same objection, but their proper combination with vegetable matter in the earth secures exhaustless fertility to the soil.

Of all soils, sandy and gravel ones are the most benefitted by plaster; and of vegetables, clover and similar grasses, appear to feel its influence the most sensibly. Heavy *wet* clays are affected by it little if any, but on soils in which sand predominates, it pushes vegetation forward as if by magic. Sown on clover or the grains, two or three bushels an acre is sufficient, and has been found the most useful after some growth had been attained, and the plants at the time of sowing moist with dew. A mixture of lime, plaster and ashes, in about equal proportions, a handful deposited in each hill at the time of planting, has been found an excellent dressing for corn, and on soils not decidedly calcareous, will be found worth the attention of every farmer. Plaster produces great effect on peas, and shows its stimulating energies almost as much on this valuable plant as on clover.

Perhaps one of the best methods of applying plaster to corn, peas, &c. is to steap the seeds in farm yard lye, and dry them in plaster at the time of sowing. Barley treated in this way, has had the crop increased nearly one third; but for wheat we should prefer drying in lime, and think the benefit would be equally certain.

CULTIVATION OF FRUIT.—No. 5.

The Pear.

The varieties of the pear are propagated by budding and grafting. The compactness of the wood renders the latter very successful. The stocks are raised either from seeds or suckers. But suckers rarely form good roots, and should only be employed when seedlings cannot be had. Seedlings are greatly improved by transplanting at one or two years of age; cutting off the lower extremity of the tap root, at the time of this operation, causes them to throw out lateral ones, and renders their final removal from the nursery more easy and safe.

As a general rule, pears should be grafted or budded on pear stocks. On the apple, thorn, and quince, their fruitfulness is much increased, but the duration of the life of the tree is greatly diminished. The same cause which produces an accumulation of the elaborated juices in the branches, and consequently an increase of flower buds, and of fruit, also prevents the proper diffusion of the sap and secretions, and shortens the life of the tree. When, for instance, the pear is grafted on the quince, the communication between the graft and the stock at the place of junction is less perfect than if their natures were more similar; the sap is impeded in its ascent, and the proper juices in their descent, and the accumulation thus produced causes the increased fertility, but prevents the free and vigorous growth of the tree. There are however several advantages of employing such stocks in certain cases.

One of the most important of these is the production of dwarfs. These are cheifly desirable in small gardens and on very limited grounds. The quince stock is commonly used for this purpose. But as the quince is very liable to be destroyed by the borer, an improvement to remedy this evil has been introduced lately into practice. The quince is first grafted on a pear stock, and the year after the pear is grafted on the quince shoot thus produced, about an inch above the previous insertion. The wood of the quice is thus made to form a portion of the trunk, by which the circulation is obstructed, and increased productiveness and diminished growth produced. A method, adopted by French gardeners, of training these dwarfs so as to still further increase their fruitfulness and diminish the space they occupy, as well as to add striokingly to the neatness of their appearance, is what is termed *quenouille* training. A single stem is suffered to run to a height of about seven feet, leaving branches at regular distances from bottom to top, about eighteen inches long. These are brought into a pendent position by bending them downwards as they grow and confining them to this position by shreds of bass until they become fixed. The tree will throw out many more shoots than are necessary; these must be pruned off, leaving only the most vigorous. The circulation is impeded and thier luxuriance checked, and consequently the production of fruit increased. Trees thus trained, need not occupy a tenth part of the space usually allotted to common standards.

Pear trees, on account of their upright, pyramidal growth, require much less space than apples. Twenty feet distance is sufficient in all cases.

The following are some of tho best varieties of the pear, which have either originated in this country, or have been proved here and found adapted to the climate.

Summer Fruit.

Little musk, or *Primitive*.

Early Sugar, *Amire Joannet* of Duhamel. These two varieties, although good, are not first rate, and are cultivated on account of their early maturity.

Madeleine. Sometimes called Harvest pear. A very fine fruit. Kenrick says it "exhibits strong symptoms of decay;"—this remark must be of only local application, as in this region it is remarkably healthy and vigorous.

Julienne. An excellent fruit, and a great bearer.

Jargonelle.

Early Rousselet. Resembles the Seckel, though not so highly flavored.

Autumn Fruit.

Seckel. Well known as a fruit of almost unequaled richness of flavor; it should be considered as indispensible, in every collection.

Cushing. A first rate fruit, originated at Hingham, Massachusetts. Kenrick says the original tree, growing in an uncultivated pasture, has produced annually *fourteen* bushels of fruit.

Bartlett. Considered identical with *William's Bon Chretien*.

White Doyenne. *St. Michael* of New-England, *Virgalieu* of New-York, and *White* Beurre of English gardeners. A proof of the excellence of this pear is furnished by the great number of names which have been given to it, no less than twenty-five being enumerated. Kenrick places it in his list of "indifferent and bad" pears, but in this state it succeeds well and is an excellent fruit.

Urbaniste. Proved in this country by R. Manning of Salem, Massachusetts, who says "it cannot be too extensively cultivated."

Sylvange Verte. Excellent, both in Europe and America.

Marie Louise. "Decidedly first rate." *Manning*.

The *Andrews*, (*Amory* or *Gibson*,) *Capiaumont*, *Dix*, *Dearborn's Seedling*, *Wilkinson*, *Johennot*, *Golden Beurri of Bilboa*, and *Gore's Heathcot*, are also very highly recommended, all of which have either originated, or been proved in this country.

Winter Fruit.

Less attention has been given to the cultivation of winter pears in this country than to the other varieties, consequently their quality and adaptation are not so well known. The following however, have been sufficiently proved:

Echassery.

Chaumontelle.

Sylvange Verte. This, though ripening late in autumn, will keep through the early part of winter.

Lewis.

Passe Colmar. Ripens late in autumn, will keep a month or two. A fruit of great excellence.

The pear tree is of longer life than most other fruit trees. In the Genesee Farmer, vol. 3d, p. 38, is a notice of a tree probably 200 years old. The celebrated tree, now standing at the corner of Third avenue and Thirteenth street, New-York, and in a bearing state, was planted by Governor Stuyvesant more than 200 years ago. The only formidable *disease* to which the pear subject, is the *Fire Blight*. This generally makes its appearance during the early part of summer. The branches affected by it suddenly turn black and die. If the disease is not checked, it frequently extends and destroys the whole tree, though this is not always the case. It has been ascribed to different causes. Observations prove that, at least in some instances, it is produced by a small insect, (*Scolytus pyri* of Peck,) which eats a small circular ring round the branch beneath the outer bark, and thus destroys it. The insect, where discovered, has been some inches below the affected part. But this is not always the cause. The writer of this article has carefully stripped diseased branches, and even whole trees, of their bark, and the closest examination has detected nothing. This absence of external injury has led to another opinion, that fire blight is caused by a too rapid growth producing a superabundant flow of sap in the branches, and consequent surfeit. In proof of this, the fact is adduced that the most rapid growing trees are most subject to this kind of blight. But as such a cause would be an anomaly in vegetable physiology, it is far more probable that it is produced by injury from the cold of winter, which would of course chiefly affect the largest and most succulent growth.* But whatever may be the cause, nearly all agree in the remedy. Professor Peck, who first described the insect, which he considered as the *only* cause, directed that the affected branches be immediately cut off at some distance below, and burnt, to destroy the insect. John Lowell states, that by steadily pursuing the system of cutting off the limbs many inches below the apparent injury, and burning them, *the insects have been extirpated from his estate*. This remedy has succeeded perfectly in other instances. It has succeeded also where the disease was evidently not caused by an insect. But it should be very speedily applied. J. J. T.

Prof. Silliman's Journal:—Cutting Timber:—Indian Mounds.

The last number of this excellent work, invaluable to the man of science, and an honor to the country, is now before us; filled with more than its usual variety of generally interesting articles, besides many belonging particularly to the cause of science alone. Among those intended for the general reader, we may mention the excursion to the White Mountains; the Notes respecting the Indian Mounds of Wisconsin; the Geology of upper Illinois; and the Dry Rot.

The article on the Dry Rot, is from the pen of Mr. Rainey, of Middletown, Conn., a ship builder of considerable experience, and though relating primarily to that kind of architecture in wood, cannot fail to be valuable to all who are engaged in cutting timber for any purpose, where duration and preservation are desirable. Mr. Rainey having become convinced that the sap was the cause of the decay of wood, instituted a series of experiments to ascertain its place in different seasons of the year, and found that in the winter the heart wood contained much more than the sap wood, while in the summer it seemed concentrated in the alburnum or outside layers of wood. It has been generally supposed that the sap of the tree was principally in the roots during the winter, and acting on this supposition, Mr. Rainey had preferred for ship building, timber cut in the winter; some cases, however, in which timber cut in the summer was used with that cut in the winter, and remained sound while the latter decayed, induced an investigation as to the cause, and resulted as stated. Mr. R. now uses timber cut as far from December as possible, and finds much less cause for complaint than formerly. The following was one of the experiments that led Mr. R. to doubt the propriety of cutting timber in winter:

"Having cut a small oak staddle, on or about the 20th of June, I placed several pieces of it in the fire place, and put a fire under them; after a little while there appeared at the end of the sticks a wet circle describing the exact thickness of the alburnum, or sap wood, and when they

* The opinion that it is caused by the fruit rotting on the branches is sufficiently disproved by the fact that trees which have never borne are liable to it. For an instance of this, see Genesee Farmer, vol. 3, p. 273.

became considerably heated, the steam rushed with violence from the tubes of the sap wood, while there was but a small appearance of vapor from the heart wood. About the same day of December of the same year, I had another small oak cut, and went through with the same process of heating several pieces of the wood; and when they began to be heated, the whole surface of the heart wood, except a small circle enclosing the pith, was wet, but the alburnum was dry, and when they were fairly heated through, the steam rushed with violence from the heart wood, though the whole quantity that escaped, was not so large as in the former case. The results of these experiments accord with a well known fact in regard to the sugar maple, namely, that no sap can be obtained from the tubes of the alburnum of the tree, and therefore they are obliged to bore a hole for the tube through the alburnum, into the heart wood before it will run."

Mr. Rainey's inference as to the position of the sap during the severe weather of winter, is probably correct, as we have observed many appearances that would go to confirm it; but, that at the time of making sugar, the sap is found in the heart wood of the maple, is decidedly incorrect, as every person acquainted with the manufacture well knows. In many cases in tapping the trees, the heart wood is not touched at all, and it is deemed desirable to avoid it when practicable. The sap of the maple will not, however, flow until the temperature of the earth and air has been raised by the sun of spring, and the circulation, which is partially or totally suspended in the alburnum during the severe frosts, is restored. The relative position of the sap is consequently changed from what it was a few weeks previous, having passed from the center to the surface through the lateral pores, or what is called the silver grain, as well as commenced its flow upwards to the expanding leaves and branches.

Farmers find the cutting of timber for posts and rails an important item in their profit or loss account; and if Mr. Rainey's experiments as to the duration of timber can be fully relied upon, or substantiated by further experience, a very great point in domestic farming economy would be gained. We think the early settlers of Western New-York could throw much light on this subject, by ascertaining the relative duration of their rail fences made from timber cut in the winter, or at midsummer, as most farms must have had specimens of both kinds; and any notices of this nature, furnished us, shall be inserted with pleasure.

Mr. Taylor's notice of the Indian monuments and mounds of Wisconsin, is a very interesting article. The notices are mostly confined to the strip of territory through which the main Indian road from Lake Michigan, near Milwaukee, passes to the Mississippi, near Prairie du Chien; but this region furnishes a greater number, and probably more perfect specimens, of these monuments of antiquity, than any other part of the Mississippi valley. That they are places of burial can no longer be doubted, as a number of large mounds were thoroughly opened the last season by order of Col. Petitval, the officer employed in surveying the Wisconsin River. They were uniformly filled with bones in the last stages of decomposition, the fibrous roots of the trees, and the coarse grass, penetrating and passing through their substance as through common earth.

But the thing that most interested us, as the fact was entirely new, was the manner in which these burial places, scattered in such countless numbers over the Wisconsin prairies, have been arranged to represent animals, birds, and even the human figure itself. The well executed drawings that accompany the article, make this plainer than words can do, and we think establish the truth of the supposition, that as particular animals were the badge or emblem of particular tribes, so in depositing the dead, these mounds were made to conform to the badge or *totem* of the tribe or individual, whether the same was the tortoise, buffalo, wolf, eagle or crane. In general, the configuration can easily be traced; and mingled with these representations of animals and birds, are works of a round or square form, and some parallelograms of nearly half a mile in length. The length of these representations of animals vary from 60 feet to 200, and rise above the level of the prairie from 5 to 10 feet. A mound which represented the human figure, was in one instance 125 feet long; from the extremity of one arm to the other 40 feet; the body 30 feet in breadth; the head 25 feet; and the elevation above the prairie 6 feet. The configuration was perfectly distinct, and Mr. Taylor says, there was no possibility of a mistake in assigning the figure to the human race.

There seems scarcely a room for doubt, as to the fact that the great west has been the abode of populous and powerful nations; far more advanced in civilization than the roving hordes that now or lately wandered over this beautiful region; and those were compelled to give way to the pressure of these, as the latter seem destined to vanish before the rapidly advancing wave of civilization, and the encroaching march of the white men. Whether the gloom that shrouds these monuments of the past in such mystery, shall be penetrated, remains to be seen.

Quality of Milk.

Further experiments appear to be needed relative to the quality of milk, for the different purposes of cheese and butter making. It is well known that the *quantity* of milk alone, yielded by a cow, is not a sufficient test of her excellence. The *quality* is of such importance, that many animals furnishing but comparatively little, are, on account of its richness, truly valuable. The following extract from Moubray may serve well to introduce this subject to the attention of farmers, and to throw some light upon it. It is an account of the product of one cow, for one year, and shows in a strong point of view, the superiority of the milk over that of our common animals. This cow was of the Sussex breed.

"Mr. Cramp's cow was seven years old, had produced five calves, and had been two years in his possession. She was fed in *summer* on clover, rye-grass, lucern, and carrots, three or four times a day. In *winter*, with hay, bran, and grains, and often fed, particularly when milking. The manger kept clean, and no sour grains, rotten or mouldy vegetables given, on any account, and the cow never suffered to overcharge her stomach, but to be well filled, and kept with a good healthy appetite. Always when milked, stripped clean to the last drop. Being so well kept, she went dry only seventeen days before calving.

Quantities of milk and butter produced by Mr. Cramp's Cow, between April 1807, *and April* 1808.

From 6th to 20th April—milk 8 quarts per day, butter 6 lbs. per week. From April 21st to June 2d—milk 22 quarts a day, butter 18 lbs. per week. From June 2d to October 5th, milk 20 quarts per day, butter 16 lbs. per week. From Oct. 6th to November 30th—milk 15 quarts per day, butter 13 lbs. per week. From December 1st to February 8th 1808, milk 13 quarts per day, butter 11 lbs. per week. From February 9th to March 14th—milk 10 quarts per day, butter 8 lbs. per week. From March 15th to April 4th—milk 7 quarts per day, butter 5 lbs. per week, —dry for calving.

Sale of the years produce and expenses.

	£	s.	d.
Sale of calf 14 days old—butter at 1*s* 4*d*— skim milk at 1*d* per quart—dung, valued at 3*l*. in all,.....	76	7	3
Total expenses, including 1*l*. 5*s*. for 10 sacks malt combs, and a Farrier's bill 12*s*. 6*d*.....	24	14	3
A year's net profit on a single cow,.....	£51	13	0"

It will be perceived that the quantity of milk yielded by the above mentioned cow did not much exceed some of the best of our common animals, but in the quantity of butter she greatly surpassed them.

The following remarks by John Hare Powell, published some years since, on the qualities of the Improved Short Horns, furnish some hints on a branch of this subject, which is of great importance, but has been hitherto but little investigated. In allusion to a sale of some of these celebrated cattle he says,

"There are about twenty or thirty head of the full blood, besides nearly as many of the common and mixed blood. Among the former is the celebrated Bellina, the famous butter cow. In her appearance, she is far below many of her companions, though when critically examined her *points* are all good. The straight back—the perfect level of the spinal column from the horns to the tail,—the square sides, the wide hips, the full brisket, the intelligent countenance, and wide spreading bag, are all there; *but she makes a pound of butter at every milking*, and hence she has not the sleek fat sides, and the filling up so necessary to a finished and beautiful subject. She illustrates the idea perfectly, which we have so often inculcated, that a deep milker or a great butter yielder cannot easily be kept fat. She illustrates another position we have advanced, that milk from different cows, apparently of equal richness, is very differently constituted. *In some, cheesy matter and whey prevail, in others cheesy matter and oil, and in others oil and whey prevail with but a slight quantity of cheesy matter.* The first is common milk, affording a small quantity of cream, and poor skim milk; the second affords a medium quantity of cream, and makes good cheese, and good skim milk; the last affords a very large quantity of cream, no cheese scarcely, and very poor skim milk—so poor indeed, that it is scarcely fit for use. This latter is the case with Bellina; when her milk has stood the proper length of time, the cream, (the milk being three or four inches deep,) is nearly half an inch thick, *and so firm that it will almost bear lifting like a buckwheat cake*, the skim milk being very inferior. Mrs. Barnitz took about half a pint of her cream in a bowl, and in a few minutes produced six ounces of the finest butter we ever tasted, by simply stirring it with a tea-spoon. The butter-milk produced was less than a small wine glass full, and that quite of a poor quality. This cow, unlike the generality of her breed, has coarse hair, and is of ordinary size, and as before remarked would be taken for an ordinary animal, except upon critical examination by a very good judge."

To be able to ascertain readily, by simple experiment, the character and quality of milk, would be to dairy farmers of the first importance. It would be bad policy to attempt to make butter from milk affording cheesy matter alone, or to manufacture cheese from milk abounding only in oil. The distinguishing characteristics of milk in relation to these points, whether by specific gravity, color, or other particulars, should claim particular attention.

It has been recommended as the best means of determining easily the richness of milk and the quantity of butter it contains, to fill a number of broad, graduated glass tubes, with milk of different kinds, and after the cream has risen, to observe its relative thickness at the top of each. But this, although ingenious and apparently correct at first glance, has been found fallacious. Neither is the *collr* of the milk a true test. A few observations, hastily made last autumn by the writer, prove further experiments necessary. One cow gave from ten to twelve quarts daily; the milk was paler than usual, and the cream lighter colored; but with one exception she was the best butter cow in the yard; the cream though not equal in thickness on the surface to some, was uncommonly *firm and tenacious*, resembling that described in the last quotation above; leaving but little butter-milk, and apparently consisting almost wholly of butter. She produced from six to seven pounds of excellent butter per week. Another cow yielded milk of a richer yellow, which produced a thicker coat of cream; but this was lighter and more spongy, and a less quantity of butter was afforded.

It would be well worth the time and labor of scientific farmers, who can constantly superintend their dairies in person, to give particular attention to this subject, and to endeavor to ascertain by well conducted and accurate experiments, ready and correct tests for the character of milk, or whether best adapted to cheese or to butter making, and the quantity of each afforded; and also to determine the best mode of causing their complete separation from the whey. Butter makers should know the precise temperature needed for the proper separation of cream from milk, and the butter from the cream, and the *time* required for each process to be effected in the best manner. No dairy room should ever be without a thermometer.

Proper and profitable selection and perchase of cows for a dairy, would be greatly facilitated by the knowledge of such tests. A single fact may show in a slight degree, the advantage of selection. Cows were purchased for the farm of the writer, for making butter, and the character of good butter makers sought, so far as a very imperfect knowledge could direct. The animals were no better in appearance than common, but in less than three months in autumn, during a part of which they had greatly diminished in milk, *four* of them * furnished three hundred pounds of excellent butter. These did not include one of the best butter makers. J. J. T.

* One of these yeilded *nine* pounds of butter per week. They had common pasture only.

Subsoil Ploughing.

Since we gave in a former number an engraving of the new subsoil plough, a variety of notices, all corroborative of their excellence, and the decided advantages to be derived from their use, have been furnished us in the foreign agricultural journals, and one or two new implements, intended for the same purpose, have been brought before the public, some of which have had their utility fully tested, and are apparently more simple in their construction than the Rackheath plough. All have, however, the same object; that of loosening the tenacious subsoil without bringing it to the surface. The British Farm. Mag. thus describes the effects produced by the subsoil plough of Mr. Smith, near Sterling in Scotland.

"This machine is a necessary accompaniment to draining; but when that is done effectually, it seems calculated to render the most sterile and unproductive soil fertile and profitable. There is no difficulty more fatal to the farmer, than cultivating a thin shallow soil, with a stiff retentive subsoil (or hard-pan.) Whatever pains may be taken with the former, however expensive the dressing which may be used in its cultivation, the nature of the subsoil will always counteract its beneficial effects. Many persons have endeavored by trenching to obviate this difficulty; but where the subsoil is of that sterile nature, and requires exposure to the atmosphere for so long a period to render it productive, few farmers have been bold enough to repeat the experiment. Mr. Smith's ingenious invention, by breaking the subsoil, without bringing it to the surface, renders it pervious to both air and water. The same chemical changes, which take place in a fallow, owing to its exposure to wind and rain, are thus brought into operation in the subsoil; whilst the upper is in the ordinary course of cropping, and when, after a few years, by the greater depth of ploughing, the subsoil is gradually mixed with the upper, it is found to be so completely changed in its nature as to be capable of producing every species of grain. The experiment has been tried for twelve years, and with uniform success."

In a later communication, Sir E. Stracey, the inventor of the plough figured in our Monthly Farmer, says he invented his plough in the year 1833, and adds,—

"I have broken up nearly 500 acres of heath land with this plough; my crops have been nearly doubled; the wheat produced on land so broken up has been fine plump grain, weighing about 63½ lbs. to the bushel; and it has fetched the best price in the market, when before the deep ploughing the land scarcely produced the seed; the wheat was poor and shriveled; and as I had no manure to lay on the ground, I can ascribe the goodness of the crop to nothing but the deep ploughing."

We think these testemonies, in addition to those formerly given, are sufficient to entitle the subject of subsoil ploughing to the favorable consideration of farmers located on such soils. Mr. Smith's plough is what is called a foot plough, its depth being regulated in the manner of common ploughs, while Mr. Sracey's is a wheel plough and its depth is determined by the set of that. Any plough maker could manufacture this implement, and any farmer who understands what is required from its operation could give the necessary directions. Great strength is evidently required, but as the head and the parts that connect it with the beam, are entirely of iron, they can be easily adapted to the resistance to be overcome.

SILK.

We have never seen the peculiar advantages of this country for the manufacture of silk more forcibly pointed out, than in the following remarks made by Gen. Tallmadge before the American Institute, and which we copy from the excellent Journal of the Institute for February. They are the result of personal observation, and not conjecture; and perhaps no man can be found more competent to observe and draw correct conclusions on all subjects connected with our manufacturing interests than Gen. Tallmadge. It forcibly shows the policy and necessity of encouraging the domestic manufacture of silk, and the wisdom of the legislative enactment proposed in its favor.

"From personal observation on the culture of silk in Italy, Sardinia, and France, assurance may be given, that our country and climate are pre-eminently adapted to the growth and culture of silk. Let a single fact suffice. In those countries the *worm* is, and must be produced by artificial means; the egg is carried and hatched in the bosoms of peasant women. In this country the egg is hatched, and the worm produced by our *natural climate*, and in accordance with the growth of the mulberry leaf, about the first week in June. Our winters do not injure the eggs. The life of the worm is only about six weeks; and the whole season of the business is embraced in June, July, and August. The remarkable *heat and dryness* of our summers are peculiar to this country, and so congenial to the silk worm, that it prospers best in our natural climate, only sheltered from storms, severe winds, and the intense heat of the sun,—and relieves from the necessity of close rooms, warmed by artificial heat, and regulated by thermometers, which are so much recommended in Europe, and which expose the worms to contagious and multiplied diseases. It is worthy of remark that the importation of silk into this country,—

In 1832 was	$9,147,000
" 1836 "	22,079,000

With these important facts before us who will not encourage the home production of such an article? It should become the staple of the north and middle states, so happily fitted to the climate, and be second only to the cotton of the South."

From the same work we extract the following table, showing in our opinion very clearly one great source of our present financial troubles. Nations are like individuals, and when they *buy to much on tick*, are apt to find trouble in the end. Credit, properly managed, is invaluable; overdone, it is a millstone around the neck, to sink an individual, or a country.

The excess of imports over exports in

1831 was	$22,000,000
1832 "	14,000,000
1833 "	18,000,000
1834 "	22,000,000
1835 "	28,000,000
1836 "	61,000,000

Whatever may have been the cause of this improvident importation, no one can avoid tracing to it much of the misery and distress which has been felt for the past two years, and for which the remedy must be home production,—more reliance on ourselves and less dependence on others.

Analogy between Medical and Agricultural Education.

The physician and surgeon, to qualify them for their professions, of preserving life, are required to study the anatomy of the human frame, the functions of every part of the system, and the nature and quality of whatever is requisite to administer to its wants, or to avert or remove the ills which it is heir to. Without this knowledge he can but *guess* at the cause or seat of disease, and of course his prescriptions must be questionable, and often hazardous. A knowledge of these matters cannot be acquired by bare practice. It must be obtained from the teachings of ages—in schools of medical science—in the dissecting-room. Hence the laws of every civilized people require in the pupil this preliminary study, before he is permitted to practice the art professionally. And no intelligent man, who justly appreciates the necessity of the science to perfect the art, likes to trust his health and his life, in the hands of a pretender, who knows nothing of the great principles of the business which he professes to practice.

So with husbandry. It embraces principles of science, upon which good modes of practice must necessarily be based; and without a knowledge of these principles, the labors of the farmer, like the prescriptions of the quack, must be either *guess work*, or confined to the routine in which he has been instructed. His soil and his animals are liable to sterility and disease which he is ill-qualified to cure. Unless he knows something of the composition of the one, and the anatomy of the other, as branches of nntural science, he is not likely to discover the true cause of an evil, nor to apply to it the right remedy. We will give a single illustration in the alternation of farm crops. It is now universally admitted, that the alternation of crops is highly conducive to good husbandry. But why is it so? Science, who exponds the laws of the Creator, in regard to inanimate matter, not only furnishes a satisfactory answer to the question, but suggests the classes of farm crops, and the order of succession, that ought to alternate and follow each other. Again,—gypsum, lime, marl and ashes, are beneficially applied to some soils, to some crops, and in some seasons, while they are not beneficial upon other soils, to other crops, or in other seasons. Science can alone explain these seeming contradictions. In a school of scientific and practical agriculture, in which a series of experiments should be continually going on, these problems would ere long be solved; rules of practice would be laid down; the results, and the natural causes of these results, would be explained, and the community, and every member thereof, who had a latent spark of improvement, or the ambition to improve his condition, would seek for, practice, and profit, from the discovery. In this, agriculture differs from most other professions. While in other professions, the benefits of improvement may be monopolized by an individual, or a small number, improvements in husbandry are accessible to all, who are not too conceited to learn, or too indolent to practise, from the examples of improvement which are every day making around them.

The result of the analogy which we have drawn, between medical and agricultural education, is this,—that science is equally beneficial to both; that while the one is destined to preserve and prolong life, the other is charged with nourishing it, and of multiplying its comforts and enjoyments; and that both are, consequently, entitled to the protecting care of an enlightened community.—*Cultivator.*

The Strawberry.

The season again approaches, when the strawberry will be in bloom, and it is in vain to expect success in the cultivation of this delicious fruit, without understanding the character of the plant. It belongs to the class of plants that have the male and female organs in the same plant and in the same blossom. Yet in all the kinds I am acquainted with, with two exceptions (the white and the monthly) the male organs are defective in one set of plants, and the female in another, and in some of the largest varieties, it amounts to a complete separation of the sexes. In some of the varieties, a single plant of either may produce a few berries, but they will generally be half formed fruit. Both kinds, are produced from the seed, and after bearing for years, they never change their character. One barren vine, is necessary to every ten or twelve bearing ones. The barren vines require watching for they will form ten new plants, where the bearing form one. An experienced eye can tell them apart, at any season. They may be distinguised at the distance of ten feet, when in bloom. The male blossom, is nearly double the size of the female. In the female blossom, the male organ can only be seen on dissecting the blossom, and bring it near the eye. In the male, they can be seen with their yellow and their brown heads, at the distance of ten feet, hiding the female organs. The principle holds good, in all the wild strawberries, I have met with, in different parts of the Union. On dissecting the blossom, the female organs will be found attached to the stem; the male, to the hull. Examine your beds when they have been in blossom a few days, and you will find the female blossoms have fruit fully formed, the male none, or very scattering. With proper attention more fruit may be raised on one hundred feet square, than by chance culture can be raised on an acre. In setting out a plantation, a person by chance may obtain both male and female plants and have a good crop. But if suffered to run, in three years, the male plants would extirpate the females. Vines must not stand too thick, or the fruit will be smothered, and never come to perfection. N. LONGWORTH.
—[*Cincinnati Express.*

Orchard Grass.

I sowed a small quantity of Orchard Grass seed, on coarse gravelly loam, the seed took well; it yielded abundantly, made good hay, and continued till the spring of 1835, when I ploughed up the small lot with the land adjoining to make an acre for the purpose of extending my experiment. I sowed three bushels of Orchard Grass seed on this acre and had the misforture to lose my time and expense.

I have a very favorable opinion of the Orchard Grass, and believe that it will do well on most soils. I intend to try it again on my gravelly hills, not doubting that if it can get hold, it will hold on longer than any other grass.
—*Yankee Farmer.*

Horse Radish.

This vegetable, so much used as an accompaniment to roast beef, is comparatively but seldom seen on our tables. It is easily cultivated, and should be in more general use. Its propagation and culture is easy, for after the roots have once taken, they require but little care. They are propagated either by slips from the old crowns, or cuttings of the roots of about two or three inches in length. Plant them in rows eighteen inches apart, a foot deep, and about 6 inches from each other. They may be used the following autumn, but it is best, to let them remain undisturbed for eighteen months or two years.—*Franklin Farmer.*

A farmer in Elliotsville, (Me.) observed that it did not cost him more than 35 cents per bushel to raise his wheat the last season. In his estimate he reckoned nothing for the use of his land, but made up the expense from the seed, at $2 50 per bushel, and all his labor excepting the threshing, which did not cost more than the value of the straw. This wheat was raised on ploughed land; some farmers doubtless raised their wheat at less expense on burned ground. Can farmers raise grain at less expense on the western prairies, where they sell it at half the price it brings in Maine?—*Yankee Farmer.*

COMMUNICATIONS.

Preparation of Wool for Market.

Mr. Editor—In a recent communication published in your journal, headed "Washing of Sheep, &c." I called the attention of my brethren wool-growers to the importance of bestowing more pains in washing their wool, and putting it up for market. I endeavored to sustain the position, that in preparing wool, which is designed for sale, *cleanliness* is of paramount importance with a view of obtaining for it an increased price. I also alluded in strong terms to the dishonesty of many farmers, and absolute frauds committed by them, upon the manufacturer, by putting all sorts of trash with the fleece, and in a way, too, which excluded it from the sight of the purchasers, whoever they were, and which was not brought to light until it passed into the hands of the sorters preparatory to manufacturing. I drew, beyond doubt, a correct picture of these vile practices, and requested the guilty to appeal to the manufacturer for confirmation of my assertions; but, fearing that few would trouble themselves about the matter, I resolved to do it for them, and accordingly addressed the following queries to Mr. Samuel Lawrence of Boston, who is associated with the Middlesex Company, the most extensive manufacturing establishment in the Union. His reply will show, that I did not err in applying to the right source for the information needed. Some other information is communicated not exactly pertinent to the subject, but nevertheless will be interesting to us all. After a perusal, it will be discovered that *some of us* have perpetrated frauds;—that the manufacturer does not ask us to be honest *voluntarily*, but he is willing to *pay* us for being so;—that, if we will stop cheating him, we shall be rewarded by handing us over the *quid pro quo*—that is, he will pay us some ten or fifteen per cent more per pound for our wool, if it be in good condition. Yes, I say again, the manufacturer agrees to *reward us for being honest!!*

Subjoined is the correspondence above alluded to:

Lansing, Tompkins Co., March 28, 1838.

Dear Sir—Being yourself largely engaged in the manufacture of wool, as well as grower of it, and amply informed on the subject of, and interested in the promotion of both—and particularly informed in reference to the gross negligence, and I may say, frauds committed by many farmers in washing and putting up their wool for market—I presume no apology is necessary in calling upon you to aid me in exposing these abuses, and convincing all, that in preparing wool designed for sale, by keeping an eye to its good condition, they promote their own interest.

As early a reply to the following queries as will suit your convenience, will oblige

Your ob't serv't,

L. A. M*******.

Samuel Lawrence, Esq., Boston.

1st. Of the average of American wool, washed in the usual way, what per centage is lost by cleansing or scouring?

2d. Is German, or Saxon wool better washed, and the general condition better than American wool? Please state the condition of Spanish wool also.

3d. Do the German wool-growers secure their fleeces with twine, or by twisting a band of wool? And which mode is most acceptable to the manufacturer?

4th. Is it not very common to find *inside* of fleeces, shorn in this country, dung locks and trash of all descriptions, entirely useless to the manufacturer? Of, say 100 pounds, what per centage is lost by purchasing, *unknowingly*, wool having this trash with it? Please state some of the most glaring instances of frauds which have come to your personal knowledge in this way.

5th. Are you not, in your purchases of wool, very much influenced, in fixing prices, by its condition,—whether well washed or badly washed,—if so, would not the difference you allow amply compensate, and more, the farmer for the extra time required in washing his wool well?

6th. Will protection, or sheltering, of sheep improve the quality of the fleece?

Boston, May 1, 1838.

Dear Sir—Absence from home a number of weeks, is my apology for so long a delay in replying to your highly esteemed favor of the 28th March.

In reply to your queries, I have to say—

1st. The average loss by scouring American wool is 34½ per cent.

2d. The average by same process on German wool is 24 per cent. Some of the best clips in Saxony will not shrink over 16 per cent, but the wool is accommodated, (technically called)—that is, the skirts and head of the fleeces taken off. Spanish wools are scoured with soap after being shorn; as we take them, they shrink about 10 per cent. The wools from New South Wales are of the Saxon family, the stock having been carried from Germany; they yield about 70 per cent of clean wool.

3d. The wools from the most celebrated flocks in Germany are packed in bales weighing about 400 lbs. each,—the fleeces never done up singly, but spread flat against each other,—there is no twine about them. This mode cannot be adopted in this country for a long time, till which, let the fleeces be secured by a gentle twist of the tail;—if your neighbors cannot make it out to their minds, let me refer them to my excellent friends, H. D. Grove or Daniel Rogers, of Hoosack, who will relieve them at once.

4th. The practice of enclosing in the fleece, clippings, &c. is too common, and should be discouraged by manufacturers. I have known six ounces of this useless stuff taken from one fleece. There is another practice equally disgraceful—the use of five to twenty times as much twine as is necessary. A short time since, I took sixty-six feet of large twine from one fleece.

5th. These cheating practices are short sighted, inasmuch as the "clean thing" brings a price proportionate. We always fix the price per pound by the quantity of scoured wool it will yield;—in our purchases we frequently make a difference of five cents per pound in precisely similar qualities. By adopting this system, the loss on our purchases is less, probably, than of some other manufacturers. For the last three years the loss in our stapling room on American wool has been 1½ per cent;—this includes clippings, twine, dirt, &c.

6th. I believe protection in winter is essential to the production of fine wool, especially in this hard climate. My acquaintance with wool-growers in this country is very extensive, and I do not know a single instance of *fine* wool being produced without sheltering the sheep. Besides the quality of the wool, there are many other considerations why sheep should be sheltered; and first, *humanity*—then *the saving of life* of old and young—*avoiding diseases* of all kinds, &c. &c. too numerous to mention.

The art of growing wool in this country is becoming better understood yearly, and I believe the time is not distant when we can afford to produce wool at about European prices. The woolen manufacturers have done a bad business since August, 1836, but their courage is unabated,—they believe the ebb has continued six months longer than was natural.

Your ob't serv't and friend,

S. Lawrence.

It is with no ordinary satisfaction, Mr. Editor, that I perceive in the above, a confirmation of all the positions I have recently, and shall continue to maintain, in the columns of the Genesee Farmer, both in regard to the present subject, and the advantages resulting from protection of sheep during the winter.

In conclusion—Once upon a time a traveler stopped at an inn and called for a repast, which, on being spread before him, he discovered something which caused no little disgust, and at once betrayed the sluttishness of the hostess—viz: *hairs in the butter*. The traveler being possessed of more than an ordinary share of equanimity of temper, instead of being indignant at this outrageous departure from the *clean thing*, he only mildly and graciously requested of her ladyship, that the next time he called, she would oblige him by putting her hairs on one plate, and the butter on another; and if he thought it desirable, he would mix for himself. So with the manufacturers. If we will persist in enclosing within our fleeces *filth, burs, clippings*, &c. &c., they implore us to put "all that sort o' thing" in one sack, and our clean wool in another, in order that they may determine the relative value; and peradventure they find it to their interest to *mix* them, that they may have that privilege themselves.

But for our particular benefit, they greatly prefer that we retain all "ding balls," or lumps of manure, for the improvement of our soil. Let us one and all adopt this, by brethren farmers, and the consequences will be, *better crops, clean wool, and cleaner consciences.*

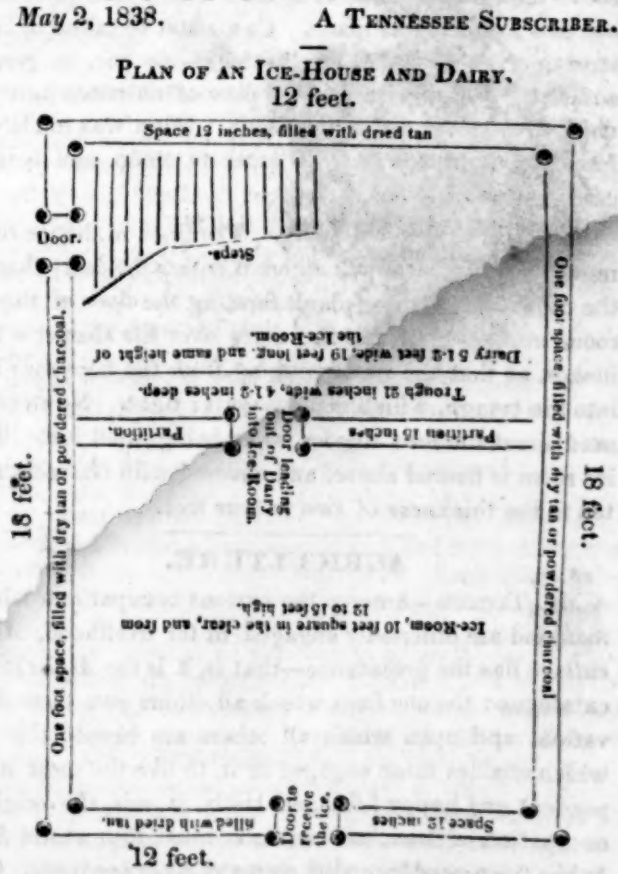
Lansing, Tompkins Co. L. A. M.

Plan of an Ice-House and Dairy.

Mr. Tucker—For several years past, it has been my design to erect an Ice-House, but had not found it convenient to do so, until the last fall and winter. I have sought for information as to its construction, from all the sources accessible to me, without, however, meeting with exactly what I desired. In Rees' Cyclopædia, the American Farmer, and the Genesee Farmer, are found some directions on that subject, and in page 323, of your last volume, more full directions than I had elsewhere met with, but still defective. Some hints were derived from friends in Kentucky, on all of which I have endeavored to improve, especially in attaching a dairy to the ice room; and which, from the experience we have had thus far, we consider preferable to a spring-house. The temperature of the dairy being 49°, enables us to keep meats, butter, milk, &c. very cool; and between the two doors leading from the dairy into the ice-room, the temperature being 40°, enables us to keep fresh meats as long as desired, there being several hooks driven into one of these doors on which to hang it. Several shelves are put up in the ends of the dairy, for the convenience of placing such articles as we desire to keep very cool. The space between the two doors leading from the dairy to the ice, is about 15 inches, the temperature of which, as above mentioned, is 40°, and it is only by opening those two doors, that access is had to the ice; commencing its use at the bottom, instead of the top as usual. No straw is used about the ice, the room being filled with it. The work, to be well done, must be done in the summer or early in the fall. If deferred until the winter, the tan cannot be made dry, or if charcoal be used, it is difficult to have it properly prepared.

May 2, 1838. A Tennessee Subscriber.

Plan of an Ice-House and Dairy.


12 feet.
Space 12 inches, filled with dried tan
Door.
Steps.
Dairy 5 1-2 feet wide, 19 feet long, and same height of the Ice-Room.
Trough 21 inches wide, 4 1-2 inches deep.
Partition 15 inches
Partition.
Door leading out of Dairy into Ice-Room.
Ice-Room, 10 feet square in the clear, and from 12 to 15 feet high.
18 feet.
One foot space, filled with dry tan or powdered charcoal.
One foot space, filled with dry tan or powdered charcoal.
18 feet.
Space 12 inches
filled with dried tan.
Door to receive the ice.
12 feet.

The above is a plan of an Ice-House and Dairy. The whole length 18 feet, width 12 feet; the pit sunk 6 feet in the ground, and to the square above the common sur-

face 9 or 10 feet. The house to be framed and finished in the common way, and weather-boarded. Another frame is made about 2 feet less every way and put up inside of the frame just mentioned, the sills of which rest on the bottom of the pit, ceiled inside, or rather weather-boarded inside, with sleepers in the common way, and the space underneath and between the sleepers filled in with dry tan; floored with 2 inch plank, jointed, and the edges grooved and joints broke, so as to convey the water which drips from the ice into the dairy and into the trough.—The partition which separates the dairy from the ice-room is double and ceiled on both sides the space, which is about 12 to 15 inches, is filled with charcoal or dry tan. The ice-room and dairy is intended to be surrounded by dry tan or pulverized charcoal, which, as put in, ought to be rammed. The doors are all double, I mean one inside and one outside, both opening the same way; except the door of entrance into the dairy, the outside one opening to the outside, and the inside opening inside, as usual. The end door to receive the ice, is 4½ feet high and 2 feet 9 inches wide, and the space between the two doors about a foot, after the ice-room is filled, is packed free of straw. The facings of the doors between the dairy and ice room, are covered with thick woolen selvage, fastened on with small tacks, so as to prevent as far as possible the access of warm air. Into one of those doors, there are driven several hooks, such as butchers use, on which to hang fresh meat; and the temperature in that open space being 40°, it can be kept there sound and fresh as long as desired. The temperature of the dairy is 49°; the dairy has several shelves, on which to place meats, butter, jars of preserves, &c. &c.; the milk in pans, is put in the trough which receives the drippings from the ice. The flight of steps must be narrow and have a railing as a safe-guard. Embankments of clay are made all around the house, to rise perhaps 2 or 3 feet above the common surface, so as to carry off the water as it may fall.

The above is a description of one which I have built, and which answers perfectly. It is better than a spring-house or dairy, and answers the purpose of both. In taking out the ice, we enter the doors leading out of the dairy into the ice room, beginning, of course, at the bottom of the ice instead of the top as usual; the ice room holds about one thousand bushels. The charcoal, when used, ought to be pounded small, or if passed through a bark mill, would perhaps be better; it ought to be fresh. If tan be used, it must be dry; and either, as put in, ought to be rammed, and the space between the frames above the ground ought to be from 2 to 4 feet, instead of one foot as mine was made. Care must be taken in constructing the frame, especially the inside one, to give it sufficient height to allow the door of entrance into the dairy to be about 6 feet in height. Mine was made too low, and requires those who enter to stoop, and besides causes the dairy to be dark.

The dairy is without a floor. The floor of the ice room must be somewhat lower where it enters the dairy than at the other end, and the plank forming the floor of the ice room must project into the dairy over the sleeper a few inches, so that the water running from the floor may fall into the trough, which is made water tight. No straw is used about the ice; the ice room being filled full. The ice room is floored above, and covered with charcoal and tan to the thickness of two to four feet.

AGRICULTURE.

Mr. Tucker—Among the various occupations which mankind are differently engaged in for livelihood, *Agriculture* has the precedence—that is, it is the *Alpha* in the catalogue; the one from which all others owe their derivation, and upon which all others are based; the one which enables those engaged in it, to live the most independent and happy life; and lastly, it was the original occupation of man, and as such must ever stand first. It has the precedence also, on many other accounts. One of which (and a very important one too) is, that Agriculture is free from many or nearly all the evils and vices, to which almost all others are subject. For instance, take the example of the merchant. His whole conversation, while behind the counter, is what might very properly be called *polite lying!* "Good morning, sir," is his salutation to some *loafer* (in his estimation) as he enters his store. "How do you do this morning, sir;" shaking his hand and bowing very genteelly, likewise asking many *pretty* questions about the *news*, the *weather*, his *family*, &c., when at the same time *out* of his business circle, he would scorn to nod his head to the same man when he met him. And, then, when he is in the act of selling his goods, he declares the price he is selling at affords *only* ten per cent on cost, and he is losing by selling so, when in five minutes he will sell the same article 25 per cent *less*. This practice is not confined to *loafers* only, but to all who can be made to believe *thus* and *so*. Now this is what I think very nearly allied to *hypocrisy* and *polite lying!* I would, however, state, that many merchants would scorn to stoop to such practices, but the example is to illustrate the *chance* for evil practices in the mercantile business.

The mechanic also, has a very great *chance* to palm off many articles at extravagant prices, which would be a cheat to accept as gifts. And so on through the whole catalogue. Look at the profession of the lawyer, the doctor, and many others, and see the evils to which they are constantly prone. Not so with that of the farmer. His products are the effects of *Nature*, and their value can be readily judged. If there is too much *chess* in the wheat he takes to market, the purchaser can see it and pay him accordingly. And if other kinds of produce are not marketable, he cannot dispose of them as *good*, but receives a price in proportion to their value.

Agriculture was the original occupation of man. This is abundantly proved from history, for the first man was commanded "to till the ground from whence he was taken." And as it was the primeval employment of man, it must necessarily follow, that all others have been derived from it, that they are mere branches of it, and depend on it for their existence. It is the pedestal on which alone they are based, and without which they would be like "a bubble on the fountain," or "the foam on the river!" Why, then, this *boasting*, this *important mien*, this *swelling flaunt*, and *high-headed-stiffness* of Prof. *such-a-one* over the honest farmer? Why this determination to use the great *I* for this, that, and the other professor, and the little *you* for the farmer? Why this anxiety also, to place the farmer among the non-essentials? The case is a plain one. A braggadocia is the veriest fool that lives. He thinks himself No. 1, and of course places No. 2 for some one else. But enough. "A change is coming o'er the spirit of their dreams," and *Mene Tekel* will be written in broad and blazing capitals on their foreheads. The saddle will be placed on the *right* horse, and Agriculture will stand, as it ought, at the head.

The farmers are the bone and sinew of the country; on them depend the prosperity and advancement of almost every improvement of the nation. Look at this wide-spread and populous country, extending from the Gulf of Mexico to the chain of great Lakes, and from the Atlantic to the "far west," presenting the most variegated, picturesque, and delightful country in the world. See the beautiful fields, scattered here and there over it, which a few years ago were covered with a vast wilderness. Who felled and cleared off the forests and made it what it is? The sturdy yeomanry of the country. Who supply the demands for food and clothing, and other conveniences of life? The farmer; the steady, industrious and praiseworthy farmer, who earns his bread by the sweat of his brow, and whose effects supply all others with nearly all the necessaries of life.

Agriculture is now in a rapid state of improvement in this country. The means for its advancement have been, and still are, most advantageously furnished by many abundantly able and persevering individuals, who merit the unbounded praise and liberal patronage of the whole agricultural community. Our State Legislatures and Agricultural Societies are also taking active measures for its furtherance and improvement; and it is to be hoped that farmers will become more generally awakened to a subject which so much interests them. There are thousands who carry on farming the *good old way* their fathers did, when, by right procedure, their farms would yield them seven fold. If such men would subscribe for some agricultural paper and receive the knowledge, instruction and experience of others, adopting the best methods of farming, those which experience and demonstration have shown to be the best, how much it would accrue to their advantage. Cultor.

Cayuga Co., April, 1838.

HOOF-AIL.

Mr. Tucker—Although there has been much said about the disease called hoof-ail, yet I think we have not arrived at the point where it will be no longer necessary to investigate the subject. It is a disease with which many of us have had some practical acquaintance for the year past; and if every person will take the trouble to inform the public whatever he has learned by observation respecting it, it may possibly be ascertained what is the cause of the disease, when the difficulty of effecting a cure will be partially removed at least.

Although I have learned but little respecting the cause, and less about the cure, I have concluded to communicate that little, hoping others will do the same, and the desired result be obtained.

The disease has been very prevalent in this vicinity the past winter, and the first object of my inquiry and observation, was to ascertain as far as possible whether the ergot produced by spear grass was the cause of it; and on examining the hay which was eaten by the cattle that were affected with the disease, I found in some instances a great quantity of ergot, and in others none at all. One man fed his cattle wholly on timothy in which there was none of that substance, and another fed on clover in which there was none, and I was told that one man whose cattle were affected, fed wholly on straw.

The first instance of the disease which came within my observation, was a near neighbor, who had two calves which were lame; one of them, he thinks, was taken in December, and about the first of February, when the other was taken lame, I saw them; the one that was taken first was then quite lame, the hoofs on both hind feet were loosened from the skin at the top, and appeared on the point of coming off, and the other calf being so little affected, we concluded to try to cure it; and having heard of cutting into the back part of the ankle and taking out a small bladder of liquid, we operated as nearly according to the directions published in the Genesee Farmer as we could, and took out the bladder on one foot, when we became convinced that it could do no good. It being sound below the skin, and that liquid appeared to be placed there for useful purposes, we let the other foot be without cutting, only we cut off the ends of the toes on both hind feet, and found the outside claws so much affected that they would not bleed, and the inside ones not affected at all; we put on spirits of turpentine then and a few times afterwards, and the calf was put in a warm stable and soon recovered so as to be but a little lame, and I think will not lose even the hoofs which were affected; the one not cut seemed to do the best. I am confident cutting did no good, and I cannot determine whether spirits of turpentine was beneficial.

I have seen several cattle which were taken lame since the first of April, when the weather was not cold.—Whether their disease was the hoof-ail, I do not know. The skin was very much inflamed and swollen between the hoof and dew claws. I cut through the skin in one instance, and found the disease went no deeper, and we applied spirits of turpentine to that which we cut and to several others, and they all recovered soon. I am not certain that the cutting or dressing did any good. I believe the remedy prescribed by Mr. Palmer of Cayuga county, (salt and water,) would be quite as likely to answer the purpose; it seemed to be an inflammation in the skin only. I have never known any cattle taken in that

way, and at that time, but soon recovered if they had nothing done for them.

Many of the cattle that I have seen, which were troubled with the disease, were kept in places which were so much sheltered from the wind and storm, and so much straw to lie on, that it seemed as though they need not freeze; but I saw none but what had been kept where they *might* have frozen. I have known but one animal affected with the disease which was stabled, and that one lay next to a door under which there was an opening of several inches, where the cold air had free access to the hind feet, which are so much affected that they will all come off.

After the cold weather was nearly gone, about the first of April, I procured some ergot of spear grass, and after cleaning it as much as I could from other substance, I had a bushel of it, which one of my neighbors fed to a calf of his, which I have mentioned as having something of the disease in February and nearly recovered; to that calf he fed a quart a day, mixed with bran to induce the calf to eat it, until the calf had eaten the whole of the bushel of ergot, and we have not been able to discover any effect that it had on the calf; in its pulse, which we examined often, or in its health in any respect.

From the above circumstances, and the fact that some cattle had the disease without eating ergot, I concluded that it was more probable that the disease was caused by something else; and that it is possible that ergot produced by spear grass is harmless, although that of rye is well known to be poisonous.

The effect of the disease, I believe, is in all respects the same as that of freezing; and as far as I have observed, the outside claws are more apt to be affected than the inside ones. I have never known an animal lose the inside claws and not the outside ones, but have known instances of their losing the outside claws and the inside ones remaining sound. The outside ones are undoubtedly the most exposed to the cold, and taking the above facts and circumstances together, I am of the opinion that the disease is caused wholly by frost; but the observation and experience of some other person may alter that opinion; I shall be quite willing to alter it whenever good cause is shown for doing so.

I cannot account for the disease being more prevalent last winter than the preceding; the weather, I believe, was not quite as cold, but it may be possible that the sudden changes, together with the excessive rains of last winter, might have had some effect.

The disease, which I mentioned, with which cattle were affected the forepart of April, may possibly be something like chilblains on the feet of children, which are, I suppose, occasioned by cold, the effects of which may last when the cause is removed, and it may be something else, but be the cause what it may, I have never known it to be very injurious.

If you think the above facts and opinions, or any part of them, are worth publishing, you are at liberty to do so, but I doubt whether they are. HEMAN CHAPIN.

East Bloomfield, May 14, 1838.

Sandy Soils.

A soil that consists entirely of small grains of a hard nature, (silex,) which neither co-here together, nor are softened by water, nor soluble in acids, though it ought not to be totally abandoned, yet is too poor to be cultivated with advantage. It would indeed be hazardous in the extreme, from the risk of having the covering mould blown off the new-sown grain, in the spring, by high winds. Sandy soils, however, generally have a considerable mixture of other substances, by which their quality is greatly ameliorated.

The best mode of improving the texture of such a soil, deficient in retentive or adhesive properties, is, by a mixture of clay, marl, seaooze, sea-shells, peat, or vegetable earth; and it frequently happens, that under the sand itself, or in its immediate neighborhood, the very materials may be found, so essential for its improvement.

In some parts of Norfolk, they have availed themselves of these auxiliaries, for improving a sandy soil, in an eminent degree; and by the continuation of judicious management, they have given a degree of fame to the husbandry of that district, far surpassing that of others naturally more fertile.

The improvement of a sandy soil, is generally accomplished by fossil manures; but vegetable substances are likewise effectual. A top dressing of peat has been tried for that purpose, and the experiment was attended, not only with immediate good effects, but with permanent benefit.

Rich sandy soil, under a regular course of husbandry, are invaluable. They are cultivated at a modern expense; and at all seasons, have a dry soundness, accompanied by moisture, which secures excellent crops even in the driest summers.

The crops raised on sandy soils are numerous, as the common turnep,—potatoes,—carrots,—barley,—rye,—buckwheat,—peas,—clover,—sainfoin, and other grases. This species of soil, in general, has not strength enough for the production of Swedish turnep, beans, wheat, flax, or hemp, in any degree of perfection, without much improvement in its texture, the addition of great quantities of enriching manure, and the most skilful management.

When under a course of cultivation, it is a great advantage to sandy soils, either to fold sheep upon them, or to consume the crops of turneps upon the ground where they were raised. These practices greatly contribute to the improvement of such soils, not only by the dung and urine thus deposited, but by the consolidation and firmness of texture which the treading of the sheep occasions.

The carrot husbandry, in the "Sandlings" of Suffolk, as they are called, is one of the most interesting objects to be met with in the British agriculture. After defraying all expenses, the clear profit, by feeding horses in the stables, is considerable, (5*l*. 9*s*. 6*d*. per statute acre.) Some prefer to fatten bullocks with them; while others, who have the advantage of water-carriage, think it most beneficial to send their carrots to the London market. Carrots are likewise an admirable preparation for other crops.

In Norfolk and Suffolk, it is found that poor sandy soils, not worth 5*s*. per acre for any other purpose, under sainfoin, will produce, after the first year, about two tons per acre, of excellent hay, for several years, with an after-grass, extremely valuable for weaning and keeping lambs. How much more beneficial than any crops of grain that such soils usually yield.

In the neighborhood of Dunbar, in Scotland, there are some farms originally of a light sandy soil, which have been rendered uncommonly productive; but they are situated on the coast, and accommodated with immense quantities of sea-weed. For many years they were cultivated in the following course of severe cropping. 1. Turneps; 2. Drilled wheat; 3. Clover; 4. Drilled wheat. By cultivation, the soil has now become a species of light loam.

The management of sandy land, according to the system adopted by the celebrated Duckett of Petersham and Esher, in Surrey, has been strongly recommended by an eminent author. It was founded on three principles: 1. Ploughing very deep: a due degree of moisture was thus preserved in his light land, by means of which his crops were flourishing in seasons of drouth, which destroyed those of his neighbors;—2. Ploughing seldom, but effectually, by a trench plough, or what is called a skim-coulter plough, with which he buried the weeds that grew on the surface; he has been known to put in seven crops with only four ploughings; and, 3. Occasionally raising a crop of turneps the same season, after a crop of wheat or of pulse.

In the Pays de Waes in Flanders, sand is likewise cultivated to great perfection. The soil of that district, which was originally a barren white sand, by a slow but sure process, has at last been converted into a most fertile loam. The surface, to the depth of three or four inches was at first alone cultivated, but the soil was gradually deepened, as it became progressively enriched, and now the ground, at the commencement of every rotation, is trenched by a *shovel*: the soil being very moist and at the depth of from fifteen to eighteen inches; the mixed surface is buried, and the fresh soil brought up, enriched by the manure washed down to it, during the seven preceeding years. It is then subjected to the following course of crops: 1. Potatoes; 2. Wheat manured sowned in November, and carrots in February, for a second crop in the same year; 3. Flax, manured, and sown with clover seed, for the next crop; 4. Clover; 5. Rye or wheat, with carrots; and 7. Buckwheat; at the end of which period the ground is again trenched.

The double crops raised in the sandy soils of Flanders, in the course of the same year, are attended with much advantage. The Flemish farmers thus obtain a greater quantity of manure, than they could produce under any other system, by which they are enabled to extract so much produce from soils, originally sterile, and which would soon revert to their former state of barrenness, without the greatest industry, and the most unweared attention.

It is a rule, in regard to sandy soils, never to pick off any small stones that may be found in them, as they contribute to prevent evaporation, and to preserve moisture. It is another rule, frequently to renovate the strength of such soils, by laying them down with grass-seeds, and pasturing them for a few years, as they are so apt to be exhausted by aration, if corn crops are too frequently repeated.

It may be added as a general rule, that the fertility of sandy, or silicious soils, is in proportion to the quantity of rain that falls, combined with the frequency of its recurrence. As a proof of this, in the rainy climate of Turin, the most prolific soil has from 77 to 80 per cent. of silicious earth, and from 9 to 14 of calcareous; whereas in the neighborhood of Paris, where there is much less rain, the silex is only in the proportion of from 26 to 50 per cent. in the most fertile parts.—[*Sir John Sinclair's Code of Agriculture.*

(*From the Tennessee Farmer.*)

Extracts of a Letter from General Washington.

The late numbers of the Farmers' Register contain a re-publication of the letters of Gen. Washington to Arthur Young, Esq. F. R. S. and Sir John Sinclair Bart. M. P., on agricultural affairs, first published in England by Mr. Young. Not originally intended for the public eye, these letters are full of interest. They abundantly exhibit the courteous gentleman—the sound patriot, and the zealous and judicious farmer. How seldom does the secret history of the great man enhance the lustre of his public character; and yet how remarkably is the converse of this proposition verified in every new developement of the private life, opinions and principles of the father of his country. Well may the farmer be proud of his avocation, when he remembers that this great man prized above all the honors of a brilliant public service, the simple and quiet pleasures of practical husbandry. We have room, at present, but for some selected passages of a single letter, with one sentiment of which we are so much taken that, as the reader will perceive, we have adopted it as the motto of our paper.

Mt. Vernon, December 4, 1788.

SIR:—I have been favored with the receipt of your letter dated the first day of July; and have to express my thanks for the three additional volumes of the Annals, which have also come safely to hand.

The more I am acquainted with agricultural affairs, the better I am pleased with them; insomuch, that I can no where find so great satisfaction as in those innocent and useful pursuits. In indulging these feelings, I am led to reflect how much more delightful to an undebauched mind is the task of making improvements on the earth, than all the vain glory which he can acquire from ravaging it, by the most uninterrupted career of conquests. The design of this observation is only to shew how much, as a member of human society, I feel myself obliged by your labors to render respectable and advantageous, an employment which is more congenial to the natural dispositions of mankind than any other. * * *

I would willingly have sent you a lock of the wool of my sheep, agreeably to your desire, but it is all wrought into cloth, and I must therefore defer it until after the next shearing. You may expect it by some future conveyance. A manufacturer from Leeds who was lately here, judges it to be about the same quality with the English wool in general—though there is always a great difference in the fineness of different parts of the same fleece. I cannot help thinking that increasing and improving our breed of sheep, would be one of the most profitable speculations we could undertake; especially in this part of the continent, where we have so little winter, that they require either no dry fodder, or next to none; and where we are sufficiently distant from the frontiers, not to be troubled with the wolves or other wild vermin, which prevent the inhabitants there from keeping flocks. Though we do not feed our sheep upon leaves, as you mentioned they do in some parts of France, yet we cannot want for pastures enough suitable for them. I am at a loss, therefore, to account for the disproportion between their value and that of black cattle; as well as for our not augmenting the number. So persuaded am I of the practicability and advantage of it, that I have raised near 200 lambs upon my farm this year. I am glad to find that you are likely to succeed in propagating the Spanish breed of sheep in England, and that the wool does not degenerate: for the multiplication of useful animals is a common blessing to mankind. I have a prospect of introducing into this country a very excellent race of animals also, by means of the liberality of the King of Spain. One of the Jacks which he was pleased to present to me (the other perished at sea) is about 15 hands high, his body and limbs very large in proportion to his height; and the mules which I have had from him, appear to be extremely well formed for service. I have likewise a jack and two jennets from Malta, of a very good size, which the Marquis de la Fayette sent to me. The Spanish jack seems calculated to breed for heavy slow draught; and the others for the saddle, or other lighter carriages. From these, altogether, I hope to secure a race of extraordinary goodness, which will stock the country. Their longevity and cheap keeping will be

circumstances much in their favor. I am convinced from the little experiments I have made with the ordinary mules, (which perform so much labor, with vastly less feeding than horses,) that those of a superior quality will be the best cattle we can employ for the harness, and indeed, in a few years, I intend to drive no other in my carriage, having appropriated for the sole purpose of breeding them, upwards of twenty of my best mares.

* * * * * * * * * *

As to what you suggest at the close of your letter, respecting the publication of extracts from my correspondence, in your Annals, I hardly know what to say. I certainly highly approve the judicious execution of your well-conceived project of throwing light on a subject. which may be more conductive than almost any other to the happiness of mankind. On the one hand, it seems scarcely generous or proper, than any farmer who receives benefit from the facts contained in such publications, should withhold his mite of information from the general stock. On the other hand, I am afraid it might be imputed to me as a piece of ostentation, if my name should appear in the work. And surely it would not be discreet for me to run the hazard of incurring this imputation, unless some good might probably result to society, as some kind of compensation for it. Of this I am not a judge—I can only say for myself, that I have endeavored, in a state of tranquil retirement to keep myself as much from the eye of the world as I possibly could. I have studiously avoided, as much as was in my power, to give any cause for ill-natured or impertinent comments on my conduct: and I should be very unhappy to have any thing done on my behalf (however distant in itself from impropriety,) which should give occasion for one officious tongue to use my name with indelicacy. For I wish most devoutly to glide silently and unnoticed through the remainder of life. This is my heart-felt wish; and these are my undisguised feelings After having submitted them confidently to you, I have such a reliance upon your prudence, as to leave it with you to do what you think, upon a full consideration of the matter, shall be wisest and best, I am with very great regard and esteem, sir,

Your most obedient and obliged humble servant,

G. WASHINGTON.

ARTHUR YOUNG, ESQ.

To separate Oats from Wheat.

A farmer observes that he can mix wheat and oats together, in equal quantities, or otherwise, and completely separate them in a few minutes, in the following manner: Make a pickle by dissolving salt in water, strong enough to float a potato, then put in the grain, and the oats and light kernels of wheat will swim, and the good wheat will sink. Soaking the wheat in pickle is a good preparation to prevent smut.—*Yankee (Me.) Farmer.*

Notice.

THE subscriber takes the opportunity of informing the Agricultural public, that his *Imported English Draught Horse* SAMPSON, will stand for Mares this season, the four last days in each week, commencing the first week in 5th mo. at home, the next at Henry Stevenson's in Henrietta, and so alternately through the season, ending the 4th of 7th mo. He will call at any of the intermediate places where his services may be required.

SAMPSON is four years old this spring, a beautiful brown bay, free from white except a small star on the forehead; is 16 hands high, compact and well shaped, weighing 1640 lbs., possessing greater muscular power than any span of horses of the same age in this part of the country; is remarkably quiet and tractable, true in harness, a fast walker, and may safely be recommended as worthy of the notice of all who wish to improve the breed of Draught Horses.

SAMPSON was bred from some of the best stock of Draught Horses in the south of England, and was selected and imported (last fall) by the subscriber, with great care and expense, for the purpose for which he is now offered to the public. It is the decided opinion of many qualified judges, that a cross between the Draught Horse and the light, active Mares of this country, will produce a stock of horses better adapted to the general purposes of agriculture than any we now have.

All persons desirous to improve their stock of Team Horses are respectfully invited to call and see the above horse.

TERMS—$10 each colt, payable by the 1st of 3d mo. next. Old unlikely mares will not be covered, unless two dollars are paid at the time. All mares that are parted with after covering, to be considered with foal.

☞ For further particulars apply to

JOHN ROBINSON.

Palmyra, Wayne Co., 4th mo. 26, 1838. my 26-3t

Siberian or Tartarian Oats.

A GOOD supply of this valuable variety of oats—a genuine article—for sale at the Rochester Seed Store.

The numerous accounts which have been published respecting the qualities oft hese Oats, render any further recommendation entirely superfluous, at least to the readers of the Genesee Farmer.

Dr. Wm. C. Dwight of Moscow, has raised them for several years, and thinks them decidedly preferable to any other variety. He recommends sowing them very thick, (from 3 to 4 bushels to the acre,) as it renders them less liable to lodge. They yield with him from 70 to 80 bushels to the acre.

May 5. REYNOLDS & BATEHAM.

Farmers' Books.

NOTICES on the Sugar Beet, containing a description of the culture and preservation of the plant; also explanations of the process of extracting its Sugar. Price 25 cts.

A Manual of the art of making and refining sugar from Beets. Price 75 cents.

Cobb's Manual on the Culture of Silk.
Chaptal's Agricultural Chemistry.
The Complete Farmer, by Fessenden.
Fessenden's American Gardener.
A Guide to Orchardists.
Smith's Treatise on the Honey Bee.
A Treatise on Cattle.
Mason's Farriery.
Barnum's American Farriery.
Vols. 1st and 4th, Genesee Farmer, bound.

For sale by D. HOYT,

Rochester, May 26, 1838. Bookseller, 6 State st.

Nursery for Sale.

A RARE chance is now offered for the purchase of a young NURSERY AND FARM at Covington, Ky., which fronts half a mile on the Licking River, within a mile of its junction with the Ohio, directly opposite to Cincinnati. The Nursery and Farm comprise 101 acres of the very richest Kentucky soil; about 50 acres are laid down to mowing; between 30 and 40 to tillage, including the Nursery, and from 12 to 15 acres are filled with timber for fencing and fuel. On the premises is an Orchard of 100 thrifty young apple trees, mostly winter fruit; was set out last year. Also, another Orchard of 200 pear trees, comprising 72 different sorts, including all the varieties of winter table pears, of which the demand for the New Orleans market is almost unlimited.

On the place is a good Brick House, built in 1816, with a first rate well of water, 45 feet deep, a large new Green House just finished, two large Barns, built in 1835, and all the usual out-houses—also, a Farm House, with two rooms that will let for $50 per annum, suitable for a gardener or small farmer.

The Nursery was laid out in 1835, and bids fair to do a very lucrative business, as there is nothing of the kind west of the mountains that can compete with it, for the variety and choice character of the fruits cultivated, which were all selected from the Nurseries of BUEL & WILSON and WM. KENRICK, and others, and comprise all the new sorts introduced by the Massachusetts Horticultural Society from Europe, and all the choice sorts cultivated near Boston; among them are 80 varieties of Pears, 50 of Apples, 50 of Peaches, 40 of Plums, 30 of Cherries, with a great variety of Grapes, Evergreens, Ornamental Shrubs, &c. &c. There are at least 100,000 seedlings of Apples, Pears, &c. of one and two years growth, for inoculation, now growing on the place.

The above offers a rare chance for one or two enterprising young men, to do a great business, in a perfectly healthy location, where there is little or no competition, and a demand for trees that has thus far exceeded the greatest expectations of its founders, and their ability to execute orders. It will be sold at a great bargain, on account of the death of the active partner of the concern, and the non-residence of the other.

For terms, apply (*post paid*) to S. C. PARKHURST, at Cincinnati, Ohio. May 19-4t

Improved Durham or Short Horn Bulls.

THE subscriber has several yearling bulls of this very choice breed for sale, from direct imported stock; also, one half Devon and Durham do. A. B. ALLEN.

Buffalo, April 3d, 1838. ap 14-6w

Drill Barrows or Planting Machines.

A NEW supply of Robbins' Patent Planting Machines, just received at the Rochester Seed Store.

Also, a number of Merchants' Patent Drill Barrows. [See No. 18, current vol. of the Genesee Farmer.]

May 5. REYNOLDS & BATEHAM.

Early Red-blazed Seed Corn.

THIS variety of Indian Corn is very productive; the ears are of good size, and by experiments made the past season, it was found to ripen earlier than almost any other variety, not excepting the celebrated Dutton. It is for sale by

May 5 REYNOLDS & BATEHAM.

☞ Many other choice varieties for sale as usual.

Root Cultivation.

A LARGE supply of new and genuine Ruta Baga, Mangel Wurtzel, Sugar Beet and Orange Carrot Seed, just received at the Rochester Seed Store.

REYNOLDS & BATEHAM.

Rochester, April 21, 1838.

New Onion Seed.

YELLOW Dutch, Large Strasburg, White Portugal and Large Red Onion Seed, the growth of 1837, just received direct from England.

The crop of Onion Seed was almost a total failure in this country last season, and being unable to obtain a supply of NEW SEED in the United States, we last fall sent an order to England for a supply from that country. It has arrived in fine order, and we are confident will prove a superior article.

REYNOLDS & BATEHAM.

Rochester, April 21, 1838.

Early Seed Potatoes.

EARLY Manley or June, and Early White Kidney Potatoes, together with a great variety of other choice kinds, for sale at the Seed Store of

May 5 REYNOLDS & BATEHAM.

Morus Multicaulis.

A FEW hundred genuine Morus Multicaulis, or Chinese Mulberry trees, just received and for sale by

May 5 REYNOLDS & BATEHAM.

Improved China, Berkshire and Tuscarora Pigs.

THE subscriber expects in the months of May and June, several litters of the above superior animals. The price of the Chinas, at 6 weeks old, per pair, will be $10,00

Berkshires and Tuscaroras, " " " 12,00

and for every month added to the above age of pigs, $1,25 will be charged on the price of the former, and $1,50 on the latter. These hogs are universally admired wherever known, and are considered the choicest and best breeds of England and America, returning the farmer a greater amount of pork for their feed than any others, and therefore the most profitable stock that can be kept.

The Improved Chinas are celebrated for the sweetness and delicacy of their meat, are easily kept fat in pasture without other food, being perfectly quiet and not wandering at all; are very handsomely spotted, a clear black and white, the colors about equal; have small short heads, ears and legs, with deep and broad bodies, and weigh from 300 to 400 lbs. according to keep at eighteen months old. There is nothing equal to these boars for crossing with other hogs, as they reduce their long coarse heads and legs, and give breadth and depth to their carcase quicker than any other kind. They have no affinity to what is commonly called the Grass breed of hogs, being of a distinct race, & entirely superior every way.

The Berkshires are highly prized for their lean, tender and juicy hams, are darker spotted than the above, and will weigh at the same age from 4 to 600 lbs.

The Tuscaroras are a cross of the China with the Berkshire and other superior breeds, have nearly the quietness and aptitude to fatten with the China, are of the same color, and weigh equal to the Berkshires. A. B. ALLEN.

Buffalo, April 3d, 1838. ap 14-6w

Superior Garden & Agricultural Seeds

THE subscriber has now on hand a full supply of Garden and Field Seeds, growth of 1837, among which are the finest Cabbages, Cauliflowers, Broccoli, Radishes, Peas, &c. that are cultivated in England, France, and Holland, together with every sort that can be raised to advantage in our own country, and which are grown expressly for my use from stock furnished and raised by the most experienced gardeners in this country; in short, every article emanating from my store, warranted genuine and fresh.

Also, Skinless Oats, Potatoe Oats, 44 lb. weight to the bushel, Perennial Rye Grass, White Clover, Lucerne or French Clover, Orchard Grass, Herd's Grass, White Mulberry, and Yellow Locust Seeds, Spring Tares or Vetches, genuine Mangel Wurtzel, and Ruta Baga and Field Turnep Seeds, also Italian Spring Wheat, well worth the attention of Farmers.

Wholesale Dealers supplied on accommodating terms. Price lists, by the pound and bushel, furnished on application, as also catalogues of my whole collection, gratis.

Flower Roots, Bulb Glasses, Green-house Plants, the best Books on Gardening, &c. at various prices, Bird seed of every sort, Pearl Barley, Oatmeal, Embdon Grots for Gruel, Split Peas, White and Brown Mustard Seed, Garden Flower Pots and Garden Tools, Russian Bass Mats.

The Flower Seed department embraces the choicest variety to be found in this country, in which are included choice double Dahlia Seed, Carnation and choice Pinks, German and China Asters, splendid Double Balsoms, with an addition of several new varieties, accompanied with a printed direction for culture and management.

Orders will be punctually attended to and carefully packed and forwarded as directed, but as the collection of distant debts are often troublesome, and sometimes impracticable, it is desired that satisfactory reference be made to persons in Albany, when the order is not accompanied with the money.

☞ Also, SEED CORN.—The subscriber has a quantity of the celebrated 12 rowed Dutton Corn; the advantage of raising this corn are its prolific qualities.

W. THORBURN, Seedsman,

Sign of the Plough, 317 N. Market st. opposite Post Office.

Albany March 17, 1838 mar24

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county, state of New York, a large quantity of Fruit Trees, grafted and innoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

apr 15-tf

N. B. CASH will be paid for a few thousand two years old APPLE TREES

Monroe Horticultural Garden & Nurseries, GREECE, MONROE CO., N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1837. ASA ROWE.